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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,334	04/08/2004	James J. Callas	02-440	8551
719	7590	12/14/2005	EXAMINER	
CATERPILLAR INC. 100 N.E. ADAMS STREET PATENT DEPT. PEORIA, IL 616296490			KLEBE, GERALD B	
			ART UNIT	PAPER NUMBER
			3618	

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/820,334	CALLAS, JAMES J.
	<b>Examiner</b>	<b>Art Unit</b>
	Gerald B. Klebe	3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 28 September 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
  - 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 April 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.



10/08/2005

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>04/08/2004</u> .	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

### ***Election / Restriction***

1. Applicant's election in the reply filed 09/28/2005 of the invention of Group I. for a vehicle cooling system, claims 1-10 reading thereon is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 11-20, reading on a non-elected invention, are hereby withdrawn from further consideration. An examination on the merits of claims 1-10 follows.

### ***Abstract***

2. The Abstract is objected-to for the following informalities:

Numeric designations for the various items described are inappropriate in the abstract and should be deleted.

Appropriate correction is required.

### ***Drawings***

3. The drawings are objected to because they do not clearly show all of the features of the claimed invention. Specifically, the specification at page 5, lines 8-9 describes "... a shroud 56 downstream of radiator 52 may direct flow of heated air away from partition 30." However, it is not clear from the drawings how the shroud is considered to be "downstream of the radiator 52" [shown only in Fig 1] nor how the shroud can direct the flow of heated air away from the partition 30 since is not shown to be forward of the partition 30. Therefore, The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the relative locations of the structures of the shroud, the

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radiator and the partition 30 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### *Specification Objections*

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Claim 9 recites the limitation that the partition is integral with the engine enclosure. No support can be found in the specification as originally filed for this limitation.

Claim 10 recites the limitation the the cooling system includes a means for inducing additional ambient air. No support can be found in the specification as originally filed for this limitation.

Appropriate correction is required. No new matter should be entered.

### *Claims Objections*

5. Claim 8 is objected to because of the following informalities:

In line 2, the word --system-- seems to be missing between “cooling” and “enclosure”; and, the symbols H3 and H1 should be deleted as being superfluous in the claim.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraina (US 4071009), cited by Applicant.

Kraina discloses a cooling system for a vehicle comprising:

a. (re: claim 1) a cooling system enclosure (Fig 1, item 25; refer col 2, lines 40-43) being positioned in the vehicle, an engine enclosure (Fig 2, item 11, taken as comprising sidewalls 18 and 19 and rear wall 20) being positioned in the vehicle, the engine enclosure being aft of the cooling system enclosure (the “aft” position being inferred from the disclosure at col 2, lines 34-38, which states that the hinges 21 and 22, shown in Fig 3 are on the rearward ends of the sidewalls 18 and 19), the engine enclosure being adapted to partially cover the engine (10); and, a partition (Fig 2; taken as the structure

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comprised of items 26, 27 and 28) between the radiator (13) and the fore portion of the engine (10) separating the engine enclosure and the cooling system enclosure, the partition being adapted to substantially block a mass of ambient air from flowing through the cooling system enclosure and the engine enclosure (col 2, lines 44-61); and,

(re:claim 2) further including a connecting member between the cooling system enclosure and the engine enclosure (see Fig 3; taken as item 46 which connects the radiator and engine and is seen to extend between the cooling system enclosure and the engine enclosure); and,

(re: claim 3) further including a cooling conduit positioned in said connecting member (taken as the interior of item 46 which conducts the engine cooling water (refer col 55-59); and,

(re: claim 4) further including a means (13) for cooling a fluid positioned in said cooling enclosure; and,

(re: claim 5) wherein the means (13) for cooling is a heat exchanger (refer col 2, lines 6-11); and,

(re: claim 6) further including a fan (12) positioned aft of the means (13) for cooling; and,

(re: claim 7) further including a shroud (Fig 2, item 28) positioned aft of the heat exchanger, the shroud being adapted to direct the mass of air away from the partition (as shown by the lower arrows "A"); and,

(re: claim 8) wherein (see Fig 2) an enclosure aft portion of the cooling system enclosure (25) has a height greater than a height of an engine fore portion of the engine enclosure (taken as the fore portion of of 26); and,

(re: claim 10) further including a means (Fig 2, item 38 and Fig 3, item 41 and refer col 3, lines 33-45) for inducing additional ambient air.

b. **Regarding the further features of claim 1** wherein the cooling system enclosure is positioned in a **fore portion** of the vehicle and wherein the engine enclosure is positioned in the **fore portion** of the vehicle, Kraina is silent. However, the examiner takes Official Notice that it is old and well known in the automotive arts to position vehicle engines and cooling systems wherever advantageous in the vehicle design, including locating them in the fore portions of vehicles so that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have positioned the engine and its associated cooling system in the fore portion of the vehicle in order to take advantage of the ram air effect to drive the additional cooling air around the engine when the vehicle is moving forward.

c. **Regarding the features of claim 9**, Kraina's partition is comprised of connected parts rather than being integral with the engine enclosure.

However, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to have made the partition integral with the engine enclosure rather than made of separately connected parts connected with the engine enclosure since it has been held that forming in one piece an article which has formerly been formed in multiple pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

***Prior Art made of Record***

8. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. The prior art of Falk et al.; of Bland; of Acre et al.; of Gielda et al.; of Kircheweger; of Boll et al.; of Weidmann et al.; of Yura; of Peter; of Skatsche et al.; of Fachbach et al.; and of Isaka each show features in common with some of the other structures of the inventive concept disclosed in the instant application.

***Conclusion***

9. Any inquiry concerning this or earlier communication(s) from the examiner should be directed to Gerald B. Klebe at 571-272-6695; Mon.-Fri., 8:00 AM - 4:30 PM ET, or to Supervisory Patent Examiner Christopher P. Ellis, Art Unit 3618, at 571-272-6914.

Official correspondence should be sent to the following TC 3600 Official number as follows: 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 gklebe / Art Unit 3618 / 1 December 2005



CHRISTOPHER P. ELLIS

ART UNIT 3618  
DECEMBER 1, 2005